Relationship between Religious Orientation and Quality of Life among Patients with Cerebral Stroke in Zanjan

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Abstract

Background and Objectives: Nowadays, the rate of cerebral stroke is increasing in Iran. Therefore, the identification of factors affecting the quality of life in patients with stroke helps researchers to have a more comprehensive understanding of its treatment. The aim of this study was to determine the relationship between religious orientation and quality of life in patients with stroke in Zanjan.

Methods: This descriptive-correlational study was conducted on 120 patients with stroke who were selected using convenient sampling. The data were collected through Allport religious orientation and World Health Organization Quality of Life questionnaires. Data analysis was performed using Pearson correlation and multiple regression.

Results: According to the results of this study, extrinsic religious orientation correlated with total quality of life (r=0.555, P=0.01), as well as physical health (r=0.400, P=0.01), psychological (r=0.737, P=0.001), and environmental (r=0.463, P=0.01) domains. Moreover, the results revealed that intrinsic religious orientation correlated with total quality of life (r=-0.443, P=0.01), as well as physical health (r=-0.219, P=0.05), psychological (r=-0.522, P=0.01), social relationships (r=-0.252, P=0.047), and environmental (r=-0.631, p=0.045) domains. In addition, the results of the regression analysis indicated that extrinsic religious orientation showed no significant prediction in terms of social relationships; however, the predictions were significant regarding other domains. Furthermore, a significant association was observed between total quality of life, psychological and environmental domains with an intrinsic religious orientation.

Conclusion: Religious orientation can have an effect on the improvement of quality of life in patients with cerebral stroke.

Keywords: Cerebral Stroke, Quality of Life, Religious Orientation.

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Introduction

The cerebrovascular accident, which is also referred to as a stroke, is an ischemic or necrosis of the neuronal cells of the brain. The stroke is a clinical syndrome characterized by neurodegenerative disorders and chronic disabling conditions. Moreover, it is one of the leading causes of disability among adults making them challenges in daily life (1). These patients not only suffer from sensory-motor deficiencies but also encounter many complications in their routine activities, which potentially affect their quality of life.

According to the World Health Organization (WHO), these complications include injury, disability, and paralysis (2). Therefore, quality of life is one of the accepted concepts that should be considered in the evaluation of treatment outcomes in patients with stroke.

As stated by WHO, the quality of life is the one's perception of his position and living conditions in the context of the culture and the value systems in which goals, expectations, standards, and attitudes play a significant role (3). The WHO indicators of the quality of life include physical health, psychological wellbeing, levels of independence, social interactions, individual beliefs, and the association between these issues and the characteristics of a peaceful environment (4). Accordingly, the quality of life is quite person-centered and is not visible to others and is based on one's perception of different aspects of his/her life (5). The evaluation of the quality of life helps researchers to understand more about the improvement of patients with stroke (6). In doing so, patients' challenges are considered more serious and treatment regimens are reviewed more strictly (7).

The quality of life in patients with stroke correlated with several factors, such as age, gender, degree of dependence in activities of daily living, the levels of disability, social support, level of depression, cognitive impairment and aphasia, as well as anxiety and aggression (6). Religious faith is among other factors affecting the quality of life in patients with stroke.

Allport describes religion as the unifying philosophy of life and divides it into intrinsic and extrinsic orientations. The intrinsic religious orientation includes organized and inner principles that are regarded as an ultimate goal, not a means to achieve a goal. A person who has an intrinsic religious orientation lives his religion and his religion is part of his personality.

On the other hand, religion is a means to achieve goals for a person who has an extrinsic religious orientation. An extrinsic religious person uses the religion to satisfy his/her individual needs (8). Several studies revealed that religious orientation has an impact on some of the cognitive and psychological factors, thereby affecting the quality of life of individuals.

In a study conducted by Nelson et al. in 2009, they found a significant inverse correlation between religiosity and depression as well as spirituality and depression (9). Moreover, Ward in 2010 investigated the relationship between depression, anxiety, and stress with religious beliefs. The results showed that extrinsic religious orientation significantly predicted the rate of depression and state-trait anxiety (10). In addition, Shamkouyan found that post-traumatic positive changes correlated significantly with perceived social support and religious beliefs in patients suffering from cancer (11).

Due to the cultural and religious context of Iran and the role of religious beliefs on all individual and social factors, the effect of religious on stroke patients and their quality of life is more than that on the life of ordinary people. Consequently, the research hypothesis in this study was the positive effect of religious on quality of life in stroke patients.

The evaluation of the effect of religious faith can play a positive role in developing plans to improve the quality of life among these patients who face severe mental health challenges in many situations. Given this background in mind, this study aimed to determine the relationship between religious orientation and quality of life in patients with stroke in Zanjan, Iran.

Methods

This descriptive correlational study was conducted between September 2016 and June 2017. The study population included all stroke patients referred and admitted to the Neurology Department of Vali-e-Asr Hospital in Zanjan between 2015 and the first six months of 2016. Out of all patients, 120 cases were selected based on convenience sampling. The inclusion criteria were: 1) stroke diagnosis based on clinical symptoms, brain imaging findings, as well as the diagnosis of two neurologists according to national institutes of health stroke scale, and 2) healthy diagnosis of Broca's and Wernicke's areas based on medical records and brain specialists, and 3) the ability to communicate, comprehend the questions, and give response.

Data were collected using the Allport and Ross Religious Orientation scale and World Health Organization Quality of Life

Questionnaire (WHOQOL-BREF). The demographic forms which sought information regarding age, educational status, and duration of the disease were collected using a checklist designed for this purpose.

The intrinsic and extrinsic religious orientation questionnaire was developed by Allport and Ross. In 1950, they designed this scale to measure the intrinsic and extrinsic orientations of religion. This scale was translated and standardized in Iran during 2000.

The WHOQOL-BREF consists of 21 multiple-choice questions measuring the religious orientations of individuals. The negative options include "I completely disagree" and "I almost disagree", whereas the positive choices are "I completely agree" and "I almost agree". The items 1-12 in this scale measure the extrinsic religious orientations which are scored based on a 5-point Likert-type scale from "I completely disagree" to "I completely agree".

On the other hand, intrinsic religious orientation is measured by items 13-21 with a reverse scoring system. Janbozorgi reported the reliability of this scale at 0.73 Cronbach's alpha using a sample of 235 respondents from universities in Tehran, Iran (12). Shafee et al. utilized the main component analysis with Abelimin's rotation method to confirm the validity of this questionnaire. They obtained a simple two-factor structure indicating 14.02 and 28.06 regarding the variance of religious orientation.

In terms of reliability, extrinsic and intrinsic orientations were estimated at 0.71 and 0.62 Cronbach's alpha, respectively. In addition, the correlation coefficient was determined at 21% by Allport and Ross (13). The Quality of Life Questionnaire was developed by WHO. In 1996, the WHO asked a group of expert to develop a questionnaire in order to make the research procedures unified and assess the quality of life. After the development of a questionnaire with 100 items, WHO made some changes and designed a shorter questionnaire with 26 items that measured the quality of life of people.

The WHOQOL-BREF consists of four dimensions regarding physical health (7 items), psychological health (6 items), social relationships (3 items), and environmental health (8 items) along with 2 general questions about the quality of life. Each question is scored based on a 5-point Likert-type scale. The total score in each dimension represents the score of that dimension and the higher the score, the better the quality of life (4).

The internal consistency of this tool was determined at 0.73 using Cronbach's alpha in a study conducted by Karami (3). In the present study, Cronbach's alpha was estimated at 0.71. After taking the required permission from the Research Deputy of Zanjan University of Medical Sciences, Zanjan, Iran, the researcher, and his assistants referred to Neurology Department of Vali-e-Asr Hospital, Zanjan, Iran, to collect data. All patients were informed of the research procedure and objectives. In case of the patients' discharge, the researcher referred to their home address to obtain information in person.

Subsequently, the patients were asked to complete the demographic forms, as well as religious orientation and quality of life questionnaires. In case of inability to complete the forms, their companions were asked to answer the questions and return the questionnaire back to the researcher assistant. In total, 120 questionnaires were collected in this study. After collecting the questionnaires, they were analyzed and the distorted items were excluded from the analytical procedure.

The exclusion criteria of questionnaires were the failure to answer 3 or more questions by the participants. Finally, out of 120 distributed questionnaires, 20 questionnaires were removed to observe the validity and 100 questionnaires were analyzed in the study.

The data were analyzed using descriptive statistics (frequency, percentage frequency, and mean±SD). In addition, the Kolmogorov-Smirnov test was employed to verify the normal distribution of data. To examine the relationship between religious orientation as a predictor variable and the quality of life as a criterion variable, the Pearson correlation coefficient was utilized in this study.

Furthermore, the effect of predictive variables was investigated using multiple regression.

Result

The mean age of the participants was 59-78 years. According to Table 1, the age range of 56-66 years obtained the highest frequency among the other categories. Regarding the educational status, the majority of the participants had an elementary school degree. Moreover, 4 and 7 years of disease duration obtained the highest frequency in this study.

Table 1: Frequency and frequency percentages of demographic variables

Variable		Frequency	Percent	Cumulative percent
Age (year)	36-46	19	19.0	19.0
	47-56	12	12.0	31.0
	56-66	34	34.0	65.0
	66-76	27	27.0	92.0
	over 76	8	8.0	100.0
Educational status	Illiterate	19	19.0	19.0
	Elementary school	41	41.0	60.0
	High school	34	34.0	94.0
	University degree	6	6.0	100.0
Disease duration (year)	1	6	6.0	6.0
	2	11	11.0	17.0
	3	4	4.0	21.0
	4	24	24.0	45.0
	5	6	6.0	51.0
	6	7	7.0	58.0
	7	16	16.0	74.0
	10	6	6.0	80.0
	12	10	10.0	90.0
	14	10	10.0	100.0

Table 2 summarizes the descriptive variables in this study. It can be seen that the mean total quality of life (all four domains), as well as the extrinsic and intrinsic religious orientations are estimated at 74.25, 47.32, and 24.44, respectively.

Table 2. Descriptive variables under study

Variable	Min	Max	Mean	SD
Total quality of life	49	95	74.25	11.53
Physical health domain	14	26	20.06	4.11
Psychological domain	9	25	18.55	4.27
Social relationships	4	11	8.33	1.77
Environmental domain	22	35	27.83	3.16
Extrinsic religious orientation	32	51	47.32	4.90
Intrinsic religious orientation	20	28	24.46	2.23

According to the results of Pearson correlation test (Table 3), extrinsic religious orientation correlated with total quality of life (r=0.555, P=0.01), as well as physical health (r=0.400, P=0.01), psychological (r=0.737, P=0.01), and environmental (r= 0.463, P=0.01) domains. Moreover, the results showed that intrinsic religious orientation correlated with total quality of life (r=-0.443, P=0.01), as well as physical health (r=-0.292, P=0.05), psychological (r=-0.522, P=0.01), social relationships (r=-0.252, P=0.047), and environmental (r=-0.631, P=0.045) domains.

Furthermore, the results of multiple regression showed that extrinsic religious orientation determined the total quality of life, as well as physical, psychological, and environmental domains at 44.5, 38.4, 64.5, and 20.5%, respectively. In addition, intrinsic religious orientation had an inverse correlation with total quality of life (22.27%), as well as psychological (18.9%) and environmental (53.2%) domains (Table 4).

Table 3: Correlation matrix of variables

	1	2	3	4	5	6
1. Total quality of life	1	0.841**	0.899**	0.628**	0.832**	0.555**
2. Physical health domain	0.841**	1	0.709**	0.360**	0.502**	0.400**
3. Psychological domain	0.899**	0.709**	1	0.516**	0.810**	0.737**
4. Social relationships	0.628**	0.360**	0.516**	1	0.531**	0.184
5. Environmental domain	0.832**	0.502**	0.810**	0.531**	1	0.463**
6. Extrinsic religious orientation	0.555**	0.400**	0.737**	0.184	0.463**	1
7. Intrinsic religious orientation	-0443**	-0.219*	-0.502**	-0.252*	0.631**	-0.485**

*P<0.05, **P<0.01

Table 4: Multiple regression analysis for predictor variables and research criteria

Predictive variables	Criterion variable	B	Standard error B	Beta	t	Significance level
Extrinsic religious orientation	Total quality of life	1.048	0.221	0.445	4.749	<0.01
	Physical health domain	0.322	0.089	0.384	3.609	<0.01
	Psychological domain	0.563	0.066	0.645	8.472	<0.01
	Social relationships	0.029	0.041	0.081	0.719	>0.05
	Environmental domain	0.132	0.056	0.205	2.334	<0.05
Intrinsic religious orientation	Total quality of life	-1.168	0.484	-0.227	-2.416	<0.05
	Physical health domain	-0.061	0.196	-0.033	-0.310	>0.05
	Psychological domain	-0.361	0.146	-0.189	-2.483	<0.05
	Social relationships	-0.169	0.089	-0.213	-1.901	>0.05
	Environmental domain	-0.751	0.124	-0.532	-6.071	<0.01

Discussion

The results of this study showed that extrinsic religious orientation correlated with quality of life and some of its components. In other words, there is a positive and direct relationship between the increasing level of religious orientation and the total quality of life. The results obtained in this study are in some dimensions consistent with the findings of studies conducted by Ghahramani, Shamkouyan, Masuleh, and Bahrami (11,14-16).

The results of the abovementioned studies revealed a significant correlation between extrinsic religious orientation and some of the factors related to the quality of life. In a study performed by Ghahramani, there was a positive and direct association between extrinsic religious orientation and social function. In addition, Shamkouyan found a significant relationship between social support and religious faith.

On the other hand, the results of the current study were not in some dimensions consistent with the findings of the studies carried out by Ward (2010), Nelson (2009), and Yousefi (2011). In the abovementioned studies, extrinsic religious orientation correlated directly with mental and psychological disorders, such as depression and anxiety in a way that extrinsic religious orientation increased the levels of psychological disorders.

Quality of life is a collection of characteristics which are valuable to the patient, and these characteristics account for the maintenance of physical, emotional, and rational health of the patients (4). On the other hand, Allport states that extrinsic religious orientation is a means by which the individual achieves his goals. In fact, according to this definition, religious acts and beliefs are not the ultimate goals but their primary purpose is to achieve extrinsic rewards from religious participation. These rewards include a sense of peace or reducing challenges resulting from physical and mental disorders (8).

Therefore, the positive and direct correlation between extrinsic religious orientation and the physical health domain may be attributed to the use of religion in order to reduce the physical health problems in patients. Indeed, if one accepts that quality of life is influenced by one's perceptions and beliefs, then s/he will find out the influence of extrinsic religious beliefs on physical health.

Following a cerebral stroke, a variety of mental disorders develop with different courses of treatments. The identification of these disorders, raising physicians' awareness of mental stroke complications, and discussing different therapies will have a significant effect on the general wellbeing of patients with stroke. Accordingly, it will help reduce psychological stress in families, especially those caring for these patients (17).

Psychological disorders are among the most important challenges after brain injury. The strong relationship between the extrinsic religious orientation and physical health domain indicates the profound effect of extrinsic religious orientation on the improvement of psychological disorders. Depression is the most prevalent disorder among patients with stroke. Many depression-related studies reported higher levels of depression after stroke (18).

In this study, there was a strong inverse correlation between intrinsic religious

orientation and social relationship domain. This inverse association may be attributed to this fact that intrinsic religious orientation is an end in itself not a means to an end. Accordingly, a person with an intrinsic religious orientation lives his religion, and this can happen in or out of the community.

Although intrinsically religious people desire to have social relationships, they do not feel obligated to communicate with others or participate in religious rituals. In a study conducted by Ghahramani, there was an inverse correlation between religious orientation and social function (14) which was in line with the findings of this study.

The relationship between religious orientation and environment was also investigated in this study. The results of hypothesis testing confirmed the relationship between extrinsic and intrinsic religious orientation with the quality of life in the respondents. The environmental domain and total quality of life refer to factors affecting patients' quality of life. These factors include living environments, urban environment, amenities, and income. The results of several studies showed that spirituality also had a positive effect on mental health and reduced mental disorders.

These studies addressed the role of spirituality in reducing the level of depression and anxiety and increasing self-control and self-esteem among individuals (18, 19, 20, 21). Therefore, it was expected that the religious orientation correlated with the quality of life and its components, such as the environmental domain. According to the studies conducted by Shamkouyan and Heidarzadeh, an association was observed between religious orientation with social support, including environmental and general domains. The obtained results are consistent with the findings of the present study.

Conclusion

Patients with stroke require support from the community and their relatives. In many cases, these patients develop depression and isolation. There will be no enhancement unless a proper intervention will be made; otherwise, their wellbeing deteriorates rapidly. Therefore, it is essential to evaluate factors leading to the improvement of patients' quality of life and psychological disorders. This study revealed the significant relationship between religious orientation and quality of. Moreover, this association was more significant regarding some certain domains. Accordingly, the identification and proper use of these factors can have an effect on the improvement of the quality of life in patients with stroke.

Conflict of interest

The authors declare no conflict of interest regarding the publication of the study.

Acknowledgements

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